Taiwan Competitive Specification - Phase A

DOCUMENT IDENTIFIER: A-SP-ELMF700-00-0000 Rev B, 23-Sep-1991

ABSTRACT: This specification identifies the approved deviations from applicable Digital standards for the manufacture of video products. These deviations are grouped according to component, product, and process.

APPLICABILITY: This document applies only to the video product line. All current Digital standards will be followed except as specifically noted in this document.

STATUS: APPROVED 23-SEP-1991; use VTX SMC for current status.

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1 INTRODUCTION

In order to manufacture competitive products, a core team composed of members from Digital GIA manufacturing in the United States and the Far East developed, evaluated, and tested modifications to manufacturing practices required by current Digital standards.

1.1 PURPOSE

In an effort to manufacture competitive commodity products, this specification identifies and describes the approved deviations from applicable Digital standards accepted for the manufacture of these products.

1.2 SCOPE

The approved deviations are grouped under three headings: component, product, and process. This specification identifies the deviations, provides a brief background for each deviation, and lists the current Digital documentation affected.

1.3 DEFINITIONS

This subhead defines the terms used in this document.

No Risk Process:
All deviations will be tested in the product or confirmed by testing in similar products to assure that there is no impact to quality, reliability or regulatory requirements.

Core Team:
Gia Group Quality Manager, HKO Plant Manager, TAO Plant Manager, Zgo Plant Manager, GiA Group M.E. Manager, Gia Group CE/VQE Manager, VIPPS & Gia Group Manufacturing Manager

PNRF:
Part Number Request Form

SPOC:
Specifications on Computer

MRCI:
Machine Readable Component Information

1.4 APPLICABILITY

This specification applies only to those products identified within the Taiwan manufacturing plant and those products using a specific manufacturing process. The product has to pass the "No Risk" process. Products introduced into the same manufacturing plant after the release of this specification and that will use the same manufacturing process may use the deviations identified in this specification provided they pass the "No Risk" process and receive the approval of the Core team, through a change to the product matrix Engineering Specification.

2 COMPONENT DEVIATIONS

2.1 DEVIATION: USE AN ALTERNATE BASE FOR LABELS

Replace aluminum foil with an alternate base material for serial labels.

2.1.1 Background

The Digital facility in Taiwan, Republic of China (TAO) will generate a waiver/deviation to the purchase specifications for labels used on existing products when the new construction is approved. The purchase specifications for future applications will be updated with the new construction information.

2.1.2 Standards and Other Documents Affected

A-PS-3626331-0-0 *Label, Serial VT300 Family*, Rev J

36-26331-07 to 36-26331-12	(VT330)
36-26331-13 to 36-26331-16	(VT340)
36-26331-17 to 36-26331-25	(VT320)
36-26331-44 to 36-26331-47	(VT320)
36-26331-56 to 36-26331-58	(VT320)
36-26331-74	(VT320)
36-26331-63	(VT320)
36-26331-71	(VT320)

Subhead 3.1.1.1, Base, and Subhead 3.1.1.2, Adhesive

Original Text

3.1.1.1 Base: 2-mil foil (3m-7804)
3.1.1.3 Adhesive: permanent pressure sensitive acrylic, 3.5 mil (3m 200-class)

Approved Deviation

3.1.1.1 Base: *4-mil flexible PVC*
3.1.1.3 Adhesive: permanent pressure sensitive acrylic, *Flexcon V-23*

2.2 DEVIATION: USE PHOSPHOR BRONZE FOR INTEGRATED CIRCUIT (IC) SOCKETS

Replace beryllium copper with phosphor bronze for IC socket contacts.

2.2.1 Background

Phosphor bronze has been identified as a viable alternative to beryllium copper for IC socket contacts in applications that have low insertion-removal frequency.

2.2.2 Standards and Other Documents Affected

A-PS-1215006-0-0 *Sockets, IC, Low Profile Highret*, Rev B

12-15006-07	12-15006-08
12-15006-25	12-15006-26

Heading 2, Applicable Documents

Original Text

QQ-C-533 Copper, Beryllium

Approved Deviation

QQ-B-750 Bronze, Phosphor

Subhead 3.1.1.2, Contacts

Original Text

Beryllium Copper per QQ-C-533, CA 172

Approved Deviation

Phosphor Bronze per QQ-B-750

Subhead 3.1.9.1, Withdrawal Force

Original Text

2 ounces (56.7 grams) minimum
After "deformation resistance testing," the withdrawal shall be a minimum of 1.5 ounces (42.5 grams).

Approved Deviation

25 grams minimum
Text deleted.

Table II, Dimensions

Original Text

TEST GAUGE	'A' +/–0.0005	'B' +/–0.0005
INSERTION	0.0140	0.0220
WITHDRAWAL	0.0080	0.0140

Approved Deviation

TEST GAUGE	'A' +/–0.0005	'B' +/–0.0005
INSERTION	0.0150	0.0210
WITHDRAWAL	0.0080	0.0150

2.3 DEVIATION: PERFORM LIMITED QUALIFICATION

Check only key criteria critical to form, fit, or function of the component in the application. Refer to other sources of data to verify specified noncritical parameters. The Qualification Report must indicate the basis for selecting the key criteria.

2.3.1 Background

Data from a reliable supplier is adequate assurance for noncritical parameters in video applications. Digital qualification procedures can be simplified if formal testing of these parameters is omitted.

2.3.2 Standards and Other Documents Affected

- 10-, 11-, 12-, 13-, 15-, 16-, 17-, 18-, 74-, and 91-class Specifications

VT320	12-28290-01	16-21807-01	16-28365-01	
VT420	12-31705-01	12-31705-02	12-31705-03	
	13-31674-01	13-31674-02	13-31674-03	13-31674-04
	13-31674-05	15-31115-01	15-31157-01	16-32519-01

	16-31156-01	16-31156-02	16-31230-01	16-31233-01
	16-31234-01	16-31641-01	16-31643-01	16-31669-01
	17-02662-01	18-11660-66	91-07956-11	91-07956-66
VT330, VT340	10-31156-03	10-31156-04	11-29769-02	11-32381-01
	12-27246-01	12-32359-01	13-32546-01	13-32657-01
	13-27013-14	13-27013-15	15-31539-01	15-32331-01
	16-27238-01	16-32360-01	16-32477-01	16-32625-01
	16-33171-01	16-32477-01	16-32518-01	17-01408-03
	17-02651-01			
VT420	74-38588-01	74-38589-01	74-38592-01	74-38596-01
	74-39134-01	74-39137-01	74-39215-01	74-39216-01
	74-39378-01	74-39379-01	74-39380-01	74-39512-01
	74-39513-01	74-39639-01	74-39640-01	74-39771-01
	74-39772-01	74-39773-01	74-40115-01	12-26771-03
	74-38587-01	74-38582-01	74-38583-01	74-38584-01
	74-38585-01	74-38591-01	74-38631-01	74-39213-01
	74-39214-01	74-39514-01	74-39638-01	74-39862-01
	74-39957-01			
VT330CR	74-38670-01	74-39492-01	74-39872-01	74-32383-02
	74-32432-02			
VT340CR	74-39491-01	74-39493-01	74-39870-01	74-39871-01
	74-32412-02	74-32432-02	74-32414-02	
VT1000	74-39208-01	74-39209-01	74-39210-01	74-39335-01
	74-39337-01	74-39903-01	74-39904-01	74-39905-01
	74-39906-01	74-40255-01		

Approved Deviations

a. For 10-class parts

The following test items will not be performed. If the supplier is reliable and included on the Approved Vendor List (AVL), qualification will be based on the test data submitted by the supplier.

- Dimensions measurement
- Marking permanence test
- Solderability test
- Lead wire pull/bend test
- Vibration test

- Temperature cycling test
- Moisture resistance
- Life test

b. For 11-class parts

The following test items will not be performed. If the supplier is reliable and included on the AVL, qualification will be based on the supplier's submitted test result data.

- Dimensions measurement
- Solderability test
- Solder heat
- Lead wire pull/bend test
- Marking permanence test

c. For 12-class electrical parts

The following test items will not be performed. If the supplier is reliable and included on the AVL, qualification will be based on the supplier's submitted test result data.

- Solderability test
- Moisture resistance test
- Vibration test
- Shock test
- Flammability test
- Life test

d. For 12- and 74-class noncurrent-carrying components

Check key dimensions only (those dimensions that affect form, fit, and function). No physical, environmental, or flammability tests will be performed on parts made with previously qualified processes and materials.

e. For 13-class parts

The following test items will not be performed. If the supplier is reliable and included on the AVL, qualification will be based on the supplier's submitted test result data.

- Solderability test
- Terminal strength test
- Moisture resistance test
- Thermal shock test
- Solder heat test
- Temperature coefficient test
- Short-time overload test
- Heat load life test
- Marking permanence test

f. For 15-class parts

The following test items will not be performed. If the supplier is reliable and included on the AVL, qualification will be based on the supplier's submitted test result data.

- Dimensions measurement
- Terminal strength test
- Seal test
- Solderability test
- Resistance to solder test
- Life test
- Marking permanence test

g. For 16-class parts

The following test items will not be performed. If the supplier is reliable and included on the AVL, qualification will be based on the supplier's submitted test result data.

- Terminal strength test
- Solderability test
- Humidity test
- Vibration test
- Dielectric strength test
- Marking permanence test
- Number of turns and turn ratio

h. For 17- and 91-class parts

The following test items will not be performed. If the supplier is reliable and included on the AVL, qualification will be based on the supplier's submitted test result data.

- DC resistance
- Dielectrical strength test

- Insulation resistance test
- Humidity test
- Solderability test
- Flammability test
- Non-migratory test

i. For 18-class parts

The following test items will not be performed. If the supplier is reliable and included on the AVL, qualification will be based on the supplier's submitted test result data.

- Solderability test
- Solder heat test
- Hermeticity test
- Frequency stability test
- Humidity test
- Mechanical shock test
- Vibration test
- Temperature cycling test

2.4 DEVIATION: PERFORM FAMILY QUALIFICATION

Fully qualify at least one part selected as representative of a family of similar parts from the same supplier. For additional family members, check only those parameters that differ from the representative (plus selected other critical criteria, if necessary). The Qualification Report of the family representative must be cited as a reference in the Qualification Report for each additional member.

2.4.1 Background

Data from the qualification of a few representative part types is adequate assurance to qualify similar parameters in similar parts from the same supplier. Digital qualification procedures can be simplified if formal testing of these parameters is not repeated.

2.4.2 Standards and Other Documents Affected

- 10-, 12-, 13-, 16-, 17-, 90-, and 99-class Specifications

VT420	10-30970-01	0-32126-01	16-32388-02	16-32388-04
	16-32388-05	16-32388-06	17-02577-01	
KOALA	17-02577-01	10-32192-01	13-27187-05	13-27187-06
	13-27187-07	16-32388-01	16-32388-02	17-02577-02
	17-02577-03			

- 99-class Packaging Specifications

  A-PS-9905128-0-0 (-19, -33, -40, -61, -74, -81, -84)
  A-PS-9906104-0-0 (-04, -29, -35)
  A-PS-9906200-0-0 (-01, -02)
  A-PS-9906553-0-0 (-00, -01, -02)
  A-PS-9906557-0-0 (-00, -03, -10, -15, -30, -31, -32)
  A-PS-9906934-0-0 (-05, -11)
  A-PS-9907025-0-0 (-03, -04, -06, -07, -08)
  A-PS-9907092-0-0 (-01, -03, -04, -05)

- 12-class Connector Specifications

  A-PS-1214979-0-0 (-00, -01)
  A-PS-1215006-0-0 (-07, -08, -25)
  A-PS-1215322-0-0 (-00, -04, -06)
  A-PS-1215323-0-0 (-00, -01, -02, -05, -08)
  A-PS-1216520-0-0 (-07, -08)
  A-PS-1216521-0-0 (-00, -02)
  A-PS-1217000-0-0 (-00, -02, -09)
  A-PS-1226013-0-0 (-05, -06)
  A-PS-1228477-0-0 (-01, -02)

- 90-class Hardware Specifications

  A-PA-PS-9009800-0-0 (-14, -15, -08)

Approved Deviation

Qualification by reference to the full qualification of a very similar or "family" part from the same supplier. Only the critical parameters different from the reference part need to be verified.

2.5 DEVIATION: USE INDUSTRIAL STANDARDS FOR 90-CLASS PARTS

Develop and load parametric information in the Machine Readable Component Information (MRCI) data base and reference a hardware manual under development. The generation of formal purchase specifications will not be required.

2.5.1 Background

The availability of the MRCI data base for component parameter information eliminates the need to generate Purchase Specifications for components in the 90-class hardware category. This category consists of industry-standard parts.

2.5.2 Affected Standards and Other Documents

DEC STD 055-0 Requirements for Purchase Specifications, Rev C
DEC STD 156-0 Introducing New Purchased Parts and Maintaining Purchased Parts Information: Standard Procedures, Rev B

Subhead 1.3.2, item f.

Original Text

Ensure that for all new parts, a technically correct Purchase specification is created, approved, microfilmed, included in Specifications on Computer (SPOC), and made available to Central Specification Control System (CSCS) for microfiching.

Approved Deviation

Ensure that for all new parts, *that part description on SPOC is complete per standard format and that the MRCI contains all of the appropriate technical information.*

Subhead 5.1.2, item d.

Original Text

Ensuring that sufficient data is available to develop a Purchase Specification and performing a subsequent review and approval of the specification when it is ready.

Approved Deviation

Ensuring that sufficient data is available to *populate MRCI fields and standard part description fields on SPOC.*

Subhead 5.1.2, item h.

Original Text

Ensuring that the vendor can technically produce and manufacture the part per Digital specifications and Digital's required volumes.

Approved Deviation

Ensuring that the vendor can technically produce and manufacture the part per *Digital requirements* and Digital's required volumes.

Subhead 6.2.2.1

Original Text

Purchase Specification exists for the component family.

Approved Deviation

Component parameters are entered in the MRCI data base.

Subhead 6.2.2.5

Original Text

Specification compliance verification ... relative to the requirements spelled out in the component Purchase Specification and applicable general specifications.

Approved Deviation

Component requirement verification ... relative to the *criteria listed in the MRCI data base and applicable documentation.*

3 PRODUCT DEVIATIONS

3.1 DEVIATION: ELIMINATE THE PROCESS VERIFICATION TEST (PVT) INFANCY/STEADY-STATE RELIABILITY ASSESSMENT

Eliminate the reliability test portion of the PVT after the PVT Build Verify and proceed directly to Ongoing Reliability Testing (ORT), if the criteria specified below are met.

3.1.1 Background

In lieu of the requirement for a unique infancy and steady-state meantime between failures (MTBF) assessment as a part of PVT, specific data will be analyzed in the Reliability Qualification Testing (RQT) to establish the infancy profile and steady-state reliability of the product as a result of the volume manufacturing process. The RQT test checks that the intended reliability level has been achieved.

3.1.2 Standards and Other Documents Affected

EL-EN522-00, Digital Qualification Process Manual, Rev A, subhead 7.1

Original Text

PVT Infancy/Steady-State Reliability Assessment

...If the process is a burn-in test, the units are run for a sufficient period of time (that is, generally a minimum of 500 hours) to establish the infancy profile of the population with adequate confidence to determine the time required to meet the infancy specification that was established.

Approved Deviation

If the following criteria are met, the RQT data may be used to establish the appropriate infancy removal parameters enabling the plant to meet its goals for infancy and steady state reliability.

1. The RQT units were built by the manufacturing plant following an established, documented manufacturing process, with qualified diagnostic test coverage, and with trained, experienced people.
2. The first two parts of PVT (PVT Theoretical Product/Process Review and PVT Build Verify) were successfully completed during the build of the RQT units.
3. The RQT test criteria (number of units and unit run times) were established following the VAXRTS NHPP process documented in EL-EN522-00, *Digital Qualification Process Manual*, Rev A, heading 6.

PVT is followed by ORT where the reliability and adequacy of the infancy removal process (burn-in parameters) are regularly monitored and adjusted if necessary, to conform to the latest VAXRTS NHPP process.

Subsequent product/process transfers to new facilities will require the receiving facility to perform the entire PVT qualification, including the reliability demonstration, to ensure that a change in the manufacturing process and personnel did not affect the infancy and reliability profiles.

3.2 DEVIATION: ELIMINATE 70-CLASS SUBASSEMBLY BAR CODE LABELS

Eliminate the bar code labels attached to 70-class subassemblies in the finished product.

3.2.1 Background

This deviation eliminates bar code labels on 70-class subassemblies. It does not apply to 70-class subassemblies used as spare parts.

3.2.2 Standards and Other Documents Affected

DEC STD 178-2 Digital Marking Requirements for Subassemblies: Field Replaceable Units (FRU) and Non-Field Replaceable Units, Rev D, heading 2, FRU Subassembly Marking Requirements

Original Text

FRU subassembly marking identification must be placed on the part in a location that is visible without having to lift, tilt, or disturb the part to see the marking.

Approved Deviation

FRU subassembly marking identification must be placed on the part in a location that is visible without having to lift, tilt, or disturb the part to see the marking, *but the label is not required on the FRUs if the FRU is used in a finished product.*

VT320 Engineering Drawing E-AD-7024240-0-DBU, CRT/Bezel/Yoke Assembly, Rev D, Note 5

Original Text

Mark item 11 with Part No. and Rev. per *DEC STD 047 Barcode Symbology Criteria*. Locate approximately as shown.

Approved Deviation

Mark item 11 with Part No. and Rev. per DEC STD 047. Locate approximately as shown. *This item is not necessarily placed on the FRUs used in a finished product.*

VT320 Engineering Drawing D-AD-7024244-0-DBU, Power Supply Assembly, Rev B, Note 3

Original Text

Mark item 9 with Part No. and Rev. per DEC STD 047. Locate approximately as shown.

Approved Deviation

Mark item 9 with Part No. and Rev. per DEC STD 047. Locate approximately as shown. *This item is not necessarily placed on the FRUs used in a finished product.*

VT320 Engineering Drawing E-AD-7024245-0-DBU, Bottom Assembly, Rev D, Note 1

Original Text

Mark item 9 with Part No. and Rev. per DEC STD 047.

Approved Deviation

Mark item 9 with Part No. and Rev. per DEC STD 047. *This item is not necessarily placed on the FRUs used in a finished product.*

VT320 Engineering Drawing D-IA-7024577-1-DBU, Monitor and Logic W/Arc Protection, Rev E, Note 1

Original Text

Mark item 8 with Part No. and Rev. per DEC STD 047. Locate approximately as shown.

Approved Deviation

Mark item 8 with Part No. and Rev. per DEC STD 047. Locate approximately as shown. *This item is not necessarily placed on the FRUs used in a finished product.*

VT420 Engineering Drawing K-AD-7026534-0-DBU, Bezel/CRT/Yoke Assembly, Rev A, Note 4

Original Text

Mark item 10 with Part No. and Rev. per DEC STD 047. Locate approximately as shown.

Approved Deviation

Mark item 10 with Part No. and Rev. per DEC STD 047. Locate approximately as shown. *This item is not necessarily placed on the FRUs used in a finished product.*

VT420 Engineering Drawing K-IA-7026536-0-DBU, System Assembly, Rev A, Note 2

Original Text

Adhere item 7 onto backside of shield (70-26538-0-DBU) firmly, approximately as shown.

Approved Deviation

Adhere item 7 onto backside of shield (70-26538-0-DBU) firmly, approximately as shown. *This item is not necessarily placed on the FRUs used in a finished product.*

4 PROCESS DEVIATIONS

4.1 DEVIATION: ELIMINATE MODULE CLEANING AFTER HAND SOLDERING

Use no-clean, cored solder in the hand-soldering station.

4.1.1 Background

The use of no-clean, cored solder in the hand soldering operation eliminates the need to process modules through a secondary batch or in-line cleaning operation, thereby reducing processing time and associated cleaning costs.

4.1.2 Standards and Other Documents Affected

DEC STD 116-1 Workmanship Standards Manual - Printed-Circuit Boards, Rev N

Subhead 4.1, Contamination/Cleaning

Original Text

4.1 Contamination/Cleaning

1. Contamination by any foreign material that may affect surface resistivity of the printed circuit assembly is not acceptable.
2. Foreign material shall be removed by thorough cleaning. Particular care shall be taken to eliminate the following:

Metal chips	Flux concentrations
Filings	Rosin flakes
Clippings	Loose terminal
Salt (food residue)	Solder balls
Wire strands	Solder splashes

Approved Deviation

4.1 Contamination/Cleaning

1. Contamination by any foreign material that may affect surface resistivity of the printed circuit assembly is not acceptable.
2. Foreign material shall be removed by thorough cleaning. Particular care shall be taken to eliminate the following:

Metal chips	Flux concentrations (*Except flux from no-clean, cored solder*)
Filings	Rosin flakes
Clippings	Loose terminal
Salt (food residue)	Solder balls
Wire strands	Solder splashes

Subhead 4.3, Acceptable (Minimum)

Original Text

4.3 Acceptable (Minimum)

1. Wax from capacitors on the module, not in the area of the contact fingers or connectors.
2. Small quantities of thermal compound are acceptable on a module provided that it is no more than 1/16 of an inch (0.063 inch or 1.59 mm) from the component (containing compound) and does not contact another circuit.

Approved Deviation

4.3 Acceptable (Minimum)

1. Wax from capacitors on the module, not in the area of the contact fingers or connectors.
2. Small quantities of thermal compound are acceptable on a module provided that it is no more than 1/16 of an inch (0.063 inch or 1.59 mm) from the component (containing compound) and does not contact another circuit.
3. *Flux residue from qualified no-clean, cored solder is acceptable on a module provided that it is not in the area of the contact fingers or connectors.*

EL-MF299-0, *Printed Circuit Boards/Modules, Cleaning Process Contamination*), Rev B, Heading 6

Original Text

No number has ever been identified that will cause a failure of the module. Therefore, any number below 20 micrograms of sodium chloride per square inch of module should be acceptable provided there is no visual contamination on the module such as flux residues and oils.

Approved Deviation

No number has ever been identified that will cause a failure of the module. Therefore, any number below *25* micrograms of sodium chloride per square inch of module should be acceptable provided there is no visual contamination on the module such as flux residues *(except flux from qualified no-clean, core solder)* and oils.

4.2 DEVIATION: USE INFRARED/CONVECTION (IR/C) REFLOW

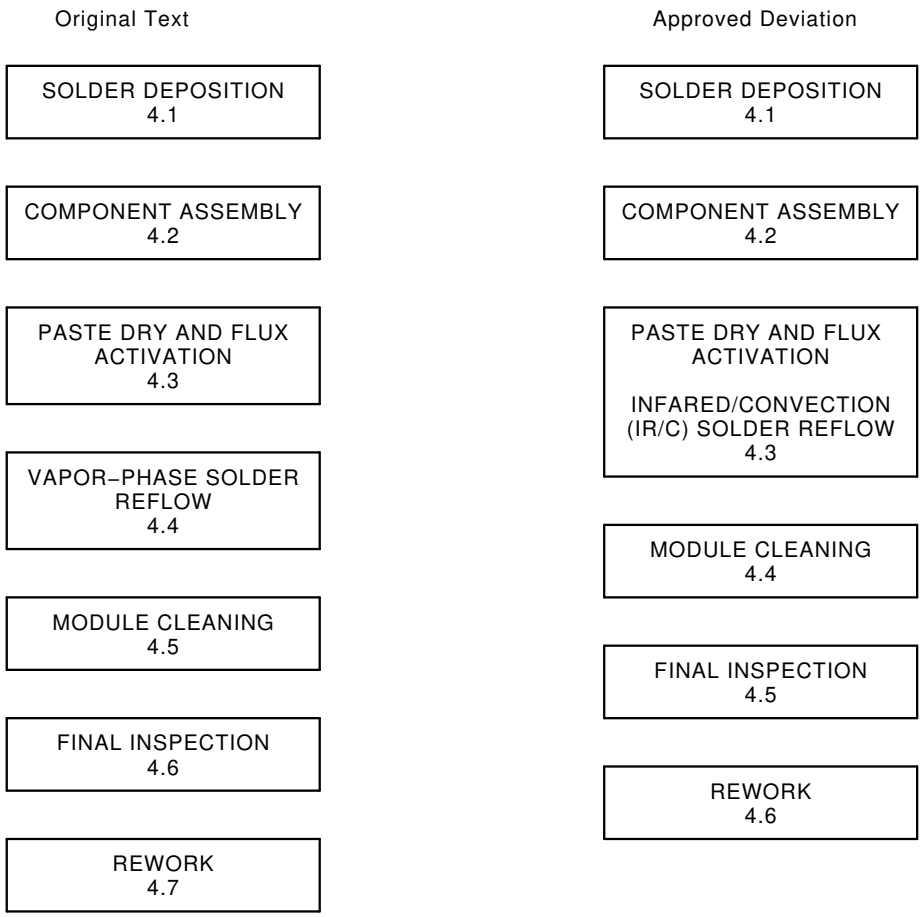
Use IR/C reflow instead of vapor process reflow.

4.2.1 Background

The use of IR/C reflow eliminates the IR prebake and vapor phase reflow processes, thereby reducing processing time and the cost of chemicals used in these processes. IR/C reflow is a proven alternative in products.

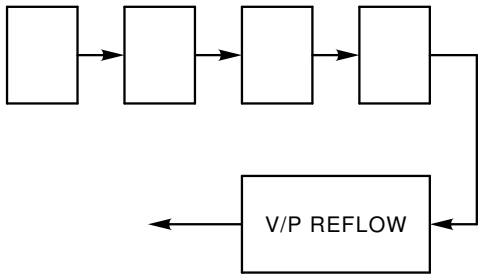
4.2.2 Standards and Other Documents Affected

EL-MF516-0, *Surface Mount Technology (SMT) Process Specification*), Rev B
Heading 3, SMT Process

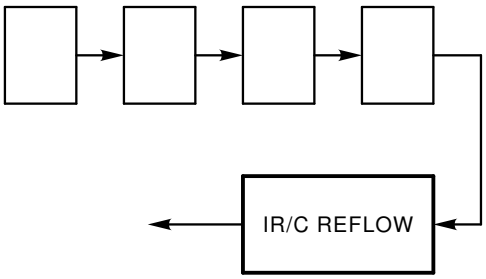


Subhead 3.1, Flowchart of Release 1.0

Original Text



Approved Deviation



Subhead 3.2, Flowchart of Release 1.5

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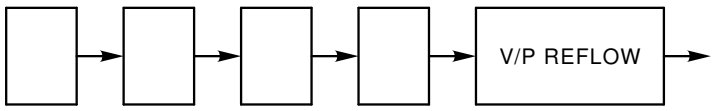

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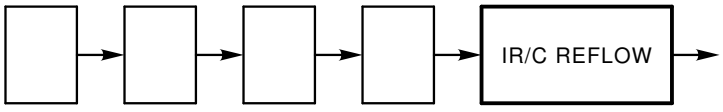

Subhead 3.3, Flowchart of Release 2.0

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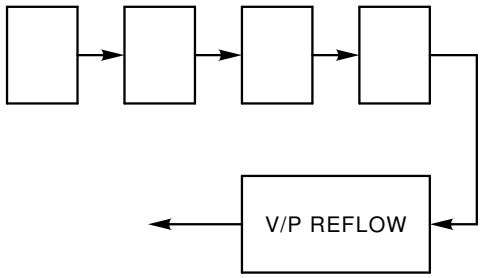

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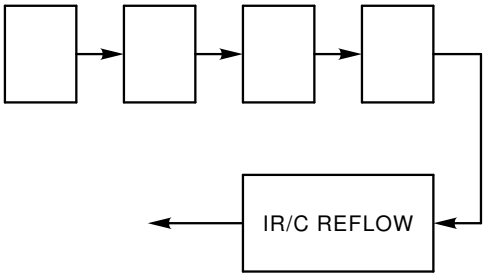

APPENDIX A AFFECTED DOCUMENTS

DEVIATION	DOCUMENTS AFFECTED
Use an Alternate Base for Labels	A-PS-3626331-0-0 *Label, Serial VT300 Family*, Rev J
Use Phosphor Bronze for Integrated Circuit (IC) Sockets	A-PS-1215006-0-0 *Sockets, IC, Low Profile Highret*, Rev B
Perform Limited Qualification	10-, 11-, 12-, 13-, 15-, 16-, 17-, 18-, 74-, and 91-class Specifications, as applicable
Perform Family Qualification	10-, 12-, 13-, 16-, 17-, 90-, and 99-class Specifications, as applicable
Use Industrial Standards for 90-Class Parts	DEC STD 055-0 Requirements for Purchase Specifications, Rev C *DEC STD 156-0 Introducing New Purchased Parts and Maintaining Purchased Parts Information: Standard Procedures, Rev B*
Eliminate the Process Verification Test (PVT) Infancy/Steady-state Reliability Assessment	EL-EN522-00 Digital Qualification Process Manual, Rev A
Eliminate 70-Class Subassembly Bar Code Labels	*DEC STD 178-2 Digital Marking Requirements for Subassemblies: Field Replaceable Units (FRU) and Non-Field Replaceable Units, Rev D* VT320 Engineering Drawing E-AD-7024240-0-DBU, *CRT/Bezel /Yoke Assembly*, Rev D VT320 Engineering Drawing D-AD-7024244-0-DBU, *Power Supply Assembly*, Rev B VT320 Engineering Drawing E-AD-7024245-0-DBU, *Bottom Assembly*, Rev D VT320 Engineering Drawing D-IA-7024577-1-DBU, *Monitor and Logic W/Arc Protection*, Rev E VT420 Engineering Drawing K-AD-7026534-0-DBU, *Bezel/CRT /Yoke Assembly*, Rev A VT 420 Engineering Drawing K-IA-7026536-0-DBU, *System Assembly*, Rev A

DEVIATION	DOCUMENTS AFFECTED
Eliminate Module Cleaning After Hand Soldering	*DEC STD 116-1 Workmanship Standards Manual - Printed-Circuit Boards, Rev N* EL-MF299-0, Printed Circuit Boards/Modules, Cleaning Process Contamination, Rev B
Use IR/C Reflow	EL-MF516-0 Surface Mount Technology (SMT) Process Specification, Rev B

APPENDIX B REFERENCED DOCUMENTS

B.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00047-00	*DEC STD 047-0 Bar Code Symbology Criteria*
EL-00055-00	*DEC STD 055-0 Requirements for Purchase Specifications*
EL-00116-01	*DEC STD 116-1 Workmanship Standards Manual - Printed-Circuit Boards*
EL-00156-00	*DEC STD 156-0 Introducing New Purchased Parts and Maintaining Purchased Parts Information: Standard Procedures*
EL-00178-02	*DEC STD 178-2 Digital Marking Requirements for Subassemblies: Field Replaceable Units (FRU) and Non-Field Replaceable Units*
EL-EN522-00	*Digital Qualification Process Manual*
EL-MF299-00	*Printed-Circuit Boards/Modules: Cleaning Process Contamination*
EL-MF516-00	*Surface Mount Technology (SMT) Process Specification*

Use VTX SMC to order copies of EL-class documents from Standards and Methods Control. Send distribution questions to JOKUR::SMC or call DTN: 234-4423.

B.2 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00047-00	*DEC STD 047-0 Bar Code Symbology Criteria*

Use VTX SMC to order copies of EL-class documents from Standards and Methods Control. Send distribution questions to JOKUR::SMC or call DTN: 234-4423.

B.3 Other Digital Documents

Document Number	Document Title
A-PS-1215006-0-0	*Sockets, IC, Low Profile Highret*
A-PS-3626331-0-0	*Label, Serial VT300 Family*

B.4 Ordering Information

Following are the sources for documents not available from Standards and Methods Control.

- Central Specification Control Systems, NRO-5/M2
- Any Microfilm Reference File

- The SPOC System
- Your Engineering Document Center.

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